PERIODICAL Indo-Pac. Fish. Council
Current Affairs Bull.
#10
Library
#10

INDO-PACIFIC FISHERIES COUNCIL

CURRENT AFFAIRS BULLETIN

LIBRARY
FISH & WILDLIFE SERVICE
PACIFIC OCEANIC FISHERIES
INVESTIGATIONS
JUN 8 1953

ISSUED BY THE IPFC SECRETARIAT, FAO REGIONAL OFFICE, BANGKOK, THAILAND.

No. 10 FEBRUARY, 1953

CEYLON

Trawlers under Colombo Plan :- Canada is understood to be supplying Ceylon, under the Colombo Plan, with two 44 ft. British Columbia-type trawlers and reconditioning for Ceylon a 145 ft. trawler purchased in the United Kingdom. Canadians will train Ceylonese in the use of the vessels and gear.

Specially designed for service in waters off the coast of Ceylon, the British Columbia vessels will be powered with 80 h.p. diesel engines and provided with equipment including fathometer, radio and fishing gear. Arrangements are also being made to supply a modern fish refrigeration plant with fish freezing, fish and ice storage and mechanical drying facilities. A pilot fish canning plant for experimental processing of different species and a mechanical salt fish drier are also to be provided.

HAWAII

Flight and Cruise Reports :- The report of the U.S. Navy Flying Boat POFI flight 2 and 3 and the cruise report 6 of the FWS M/V C. H. GILBERT, as also cruise report 19 of the H.M. SMITH and the Industry Vessel TRADEWIND show interesting observations relating to scouting the surface schools of tuna, capture on commercial scale, correlation of tuna distribution and plankton etc.

Comparable numbers of fish schools were sighted in practically the same waters by the plane POFI and the M/V GILBERT. Bird sightings were scanty, but the presence of jaegers and skuas unrecorded in the Mid-Pacific in the previous years is interpreted to suggest the possibility of marked irregularities in recent weather and/or hydrographic patterns.

Hydrophone measurements and recordings of vessel noise and the sounds caused by various organisms were made. Continuous records of near surface temperatures were obtained. Notable temperature inversions were detected in Hilo Bay. Morphometrics were taken on selected specimens of the catches and material was obtained for studies on food and sexual maturity. Ecological data were obtained in the Palmyra Island area on current, chemical nutrients and plankton in relation to variations in tuna catch.

One of the limiting factors of commercial catches in the Line Islands area was noted to be the inadequate distribution of bait.

Oceanic Hydrobiology — Field Manual :- The Biology Section of the Scientific Field

Manual of the Pacific Oceanic Fishery Investigations outlines the methodology followed in planning and reporting cruises, identification of data, observations on morphometry, sex and feeding of tuna and shark, recording of fishing operations, sight observations on fish, birds and mammals, collection and preservation of plankton, preservation of fish for biological specimens and shipboard photography, and includes a list of common Central Pacific fishes.

The General Section deals with standing orders for operation of POFI vessels, communication at sea, medical treatment, custom, immigration and health requirements, coast guard requirements, passport, travel regulations etc.

A second edition of the manual is expected to be issued shortly.

HONGKONG

Mechanization Exhibition :- A Marine Engines Exhibition was held at the Aberdeen Fish Market, Hong Kong, by the Fisheries Division of the Department of Agriculture, Fisheries and Forestry. Seventeen local concerns including some oil companies and one ship-building firm participated. There were on show, some recently mechanized vessels displaying the engine installation and safety precautions and various makes of engines. There were also models showing how the engines work. Fuel and lubrication aspects received due attention. Film-shows in the evenings served to illustrate the various features of mechanical propulsion in the fishery industry. Eight films relating to sea fishing were flown from the Fisheries Division of the FAO Regional Office, Bangkok, for the purpose of the exhibition.

The exhibition proved to be a source of instruction and inspiration to the Hong Kong fisherfolk and others interested in the trade. Opening the Exhibition, Mr. W. Sprague declared how the occasion reflected the remarkable change which had occurred in recent years in the propulsion of Chinese craft.

The extent to which the traditional fishing junk, which had been evolved and developed in the course of past ages with a view to good sailing qualities, would lend itself to mechanization was by no means certain. The first step was to fit motors in existing sailing vessels of normal junk form. With more experience it might be found desirable to develop a more specialised type of craft with more efficient propulsive qualities. Further, the success of mechanization would depend considerably on efficient maintenance of the installations. Facilities for the necessary instruction to the personnel involved were also provided.

INDIA

Technical Assistance from Norway :- The technical aid given under a tripartite agreement between Norway, India and the United Nations, will concentrate on fishery development in the State of Travancore-Cochin, including the improvement of the living conditions of the fisherfolk. The Norwegian Mission headed by Dr. Diderich Lund is to work with headquarters near the fishing villages of Sakthikulangara and Puthanthura, north of Quilon. The mission will include besides Dr. Lund, five other Norwegian experts—an engineer, a doctor, a nurse, a specialist on social welfare and an administrative secretary.

Mr. Kristensen's assignment :- Mr. M.O. Kristensen's assignment (*vide* CAB No. 8) has been extended up to the 10th of April to work with the FAO and for the Norwegian Committee in Travancore-Cochin.

West Coast Fisheries :- The 95 foot trawler, *Kanya Kumari*, owned by the West Coast Fisheries (Travancore) Ltd., is to exploit some of the new fishing grounds charted off the Bombay and Saurashtra coasts by the Japanese trawler Taiyo Maru No. 17. The *Kanya Kumari* is manned by an Indian crew of 17 with two Japanese technicians of the trawler

Taiyo Maru to train the crew in Japanese methods of fishing.

Bombay trains fisherboys :- The Bombay Fisheries Department is arranging the training of youths of the fishing community as captains and mechanics for fishing vessels.

MALAYA

Fishing :- The number of gears in operation showed a slight incline in October, 1952, the figure being 11,807 as against 11,734 in September. The landings rose correspondingly to 166,876 pikuls from the September figure of 150,827. The blat pok season in the north-west region is reported to be commencing. The total amount of marine products such as dried and salted fish, manure and blachan turned out during the month was 31,826 pikuls.

Freshwater Fisheries :- Pond digging is proceeding in Kelantan under Departmental guidance.

Co-operative :- Shariket Penangkap Ikan at Kuala Perlis is reported to have established itself as a fish sales agency for its members.

Ice Plant :- A new ice plant is being installed by Kelantan Ice Factory.

Modified Ring Net makes good catches:- The ring net with reduced mesh size installed in the Scottish power vessel *Trustful IV* and mechanically operated in Malayan waters under the supervision of Captain Liston and four other Scottish fishermen has begun to yield good catches. Operations including training of local personnel are taking place off the Perak coast. It is expected that by the end of August a well-trained local crew under a Malay skipper will take over the training of additional units of local fishermen.

The Singapore Fisheries Department is engaged in experiments on the Lampro Unit method of fishing, using lights for night fishing and the Danish "Seine". The *Dunvegan*, a research vessel of the Pan Malayan Fisheries Deparment fitted with supersonic equipment, is to pursue the detection of deep-sea shoals of fish.

PHILIPPINES

Officers' Movements :- Mr. V. Uyenco, Fisheries Chemist, has proceeded to Australia on a scholarship granted by the Australian Government under the Colombo Plan.

Mr. A. D. Manalo, Fisheries Technologist and Administrative Officer of Dagat-dagatan Salt-water Fishery Experimental Station, has proceeded to Zamboanga as District Fishery Officer to attend among other duties to the preliminaries for the establishment of a vocational school of fisheries.

Mr. J. Ronquillo, Fishery Biologist, has succeeded Mr. Manalo as Administrative Officer of the Dagat-dagatan Station.

Bureau shifts to new building :- The Bureau of Fisheries has shifted to 330 M.H. del Pilar, Manila. The offices of the Director and the Divisions of Fish Culture and Fisheries Biology, Commercial Fisheries, Fisheries Technology, Licenses and Regulations, Investigation and Inspection and Administration are now housed in this building. The Institute of Fisheries Technology continues to be housed in the Library Annex of the University of Philippines building on Taft Avenue.

Deep-sea Fishing Association :- The owners of deep-sea fishing boats in Navotas have organized themselves into a non-stock corporation called the "Inter-island Deep-sea Fishing Association Inc." Director Villadolid of the Bureau of Fisheries is the adviser of the association.

THAILAND

Inland Fisheries :- A two-year programme for the development of the swamps of the Korat area in Eastern Thailand is on hand. To begin with, the waters are to be stocked with *Trichogaster* (pla salid), *Puntius* (pla tapien) and *Tilapia* (pla mor ted).

Nepa flower fibres have been observed to be suitable for the deposition of carp eggs during spawning.

A freshwater fish culture training course will be conducted at Bangkhen near Bangkok commencing 14th May, 1953, for six weeks.

Extension work on the culture of *Tilapia* is progressing in various districts, and the fish is gaining steady popularity among pond-owners.

INDO-PACIFIC FISHERIES COUNCIL

Executive Committee Meets in Japan :- The Second (1952-53) Meeting of the Executive Committee is to take place in Tokyo in the second week of April.

PACIFIC SCIENCE ASSOCIATION

Pacific Science Congress :- The 8th Pacific Science Congress will be held from 16th to 28th November, 1953, at Quezon City, Republic of Philippines, where the National Research Council of the Philippines will act as Host Institution. Its president, Dr. Vidal A. Tan, is also president of the Congress. Dr. D.V. Villadolid, Director of the Philippine Bureau of Fisheries, will be the Organizing Chairman for Oceanography.

The Pacific Science Association which held its first Congress in Honolulu, Hawaii, in 1920, has as one of its objectives "to initiate and promote cooperation in the study of scientific problems relating to the Pacific Region, more particularly those affecting the prosperity and well-being of Pacific people." Membership of the Association is open to countries and dependencies within or bordering on the Pacific or having territorial responsibilities in the area.

It will be recalled that the IPFC at its 4th Meeting held at Quezon City passed a resolution recording its interest in the symposium on physical and biological oceanography which is scheduled to take place at the 8th Pacific Science Congress.

GENERAL FISHERIES COUNCIL FOR THE MEDITERRANEAN

Information Bulletin :- The General Fisheries Council for the Mediterranean proposes to publish an "Information Bulletin" which would include "in addition to matters relating to the Secretariat's work, short, technical, statistical and other reports of particular interest to the fishing industry of the Mediterranean Region".

PUBLICATIONS

FAO Publications :- "Algae as Food" by Prof. Borgstrom of Sweden — to be published in the FAO Fisheries Bulletin.

"Fisheries Administration" by Dr. Croker of the U. S. A. — to be published in the FAO Fisheries Bulletin.

Chinese-American Joint Commission :- "Milkfish Culture in Taiwan" by Tung-pai Chen.

Publication No. 1 of the Fisheries Series of the Chinese-American Joint Commission on Rural Reconstruction deals with the culture of milkfish in Taiwan.

Dating back at least to the reign of Cheng Cheng Kung (Kosinga) 300 years ago if not to earlier days of the Dutch settlement in Taiwan, milk fish culture has spread steadily in Taiwan especially in the Tainan and Kaohsiung areas, where warm, brackish waters abound in the coastal regions. After Taiwan was turned over to the Chinese Nationalistic Government, no more salt was required for export to the Japanese islands, and the extensive salt fields which flourished during the Japanese occupation have since been

converted into productive fish ponds. For the year 1949 alone a total production of about $13\frac{1}{2}$ million Kg. is estimated from over eleven thousand hectares of milkfish ponds in Taiwan. The fry of milkfish occurs along both the east and west coasts of southern Taiwan, but the supply is hardly sufficient to meet the demand for fish seed. In 1943, when the Japanese occupied Philippines, the Japanese Government brought three boat-loads of milkfish fry from the Philippines for distribution to the fish farmers in Taiwan. Further, large numbers of fry are reported to have been sold in black market transactions.

It is stated that "there is no use to expand the fish pond acreage when there are not sufficient fish for stocking purpose". Towards an increase of seed supply, it is suggested that since the distribution of the milkfish fry along the coasts of Taiwan is related to water temperature, current, prevailing wind and other oceanographic conditions, these aspects should be studied and correlated, and that the horizontal and vertical distribution of the fry in the coastal waters should be studied so as to determine ways and means of improving the method and gear used for catching the fry. Improvement of the cultural technique especially feeding, pond fertilization, stocking of compatible species etc., through research and demonstration is also advocated.

GENERAL

Water Works and Protection of Natural Resources :- The Third General Assembly of the International Union for the Protection of Nature which met at Caracas in September, 1952, in a resolution requests the governmental and private organizations charged with the construction of public works—particularly those designed to utilize hydro-electric energy—to plan either to follow or to instigate research or inquiries for specifying the repercussions on the natural equilibrium and on flora and fauna which are caused by such works and to contribute to such research their financial, technical and moral assistance. The Union is to furnish the necessary directives to ensure that the result of such enterprises will be satisfactory to all concerned. In another resolution the Assembly recommends that whereas the construction of dams for hydro-electric or other projects is often achieved without appropriate scientific study of the effects of such works on other natural resources and whereas it is possible that the management of one natural resource of any kind can seriously affect other resources of equal or superior value, the Union should make an insistent appeal that for all new proposed construction, careful studies of all the resources should be made —if they do not already exist—before any plans for the construction or execution of such an enterprise shall be decided.

The Assembly expressed the hope that all countries undertaking large scale public works capable of compromising the natural balance should establish a consulting commission—if such a commission does not already exist—of experts in the various subjects concerned.

Fish Preservation :- Commenting on the researches on fish preservation conducted by the Torry Research Station since its inception over two decades ago, Dr. W.A. Emply of the CSIRO. Division of Food Preservation, Australia, observes, "It has been concluded that the problem of landing fish in good condition beyond the safe holding period of about eight days under the best obtainable chilling conditions can be solved only by freezing fish at sea. The possibilities of brine freezing in wells of the trawlers' holds have been studied, and a small pilot plant capable of freezing slabs of fish up to about 3 inches in thickness between movable vertical refrigerated plates has been installed on the Station's experimental vessel.

The deterioration of frozen white fish during cold storage is still being investigated through fundamental studies of "denaturation" of the fish muscle proteins and by determi-

nation of "drip" from the cut surface of the fish during thawing. Fundamental aspects of the problems of fat oxidation and rancidity, which are of particular importance in the frozen storage of herring, are also being studied.

It has been demonstrated also that fish guts (from white fish) which are normally discarded at sea and which amount to about five per cent of the weight of the whole fish, can be preserved in dilute formalin for several weeks and can then be converted in the ordinary way to feeding meals of good nutritive value"

Refrozen Fish :- The U.S. Fish & Wildlife Service Laboratories have for some time had as one of their projects the histological evaluation of the muscle from fish frozen once and twice. These histological studies were to be made originally to supplement the findings of other tests in evaluating the quality of the fish prepared and stored in the course of this project. It was, at first, thought that as a result of refreezing some quality differences would occur but it is reported that none showed up.

Slow Freezing and Quick Freezing :- Mr. J.D. Winter of Minnesota University has reported that contrary to popular belief that slow-freezing leads to the rupture of cells, it is fast-freezing that shatters the cell membrane owing to the expansion of intracellular ice. In slowly-frozen foods, the ice crystals are large and are found in spaces between the cells. In fast-frozen foods the crystals are small and are found within the cell structure. The amount of ice formed in the space between the cells depends on the time available for fluids to pass by osmosis from the intercellular to the intracellular spaces.

United States stated to be the main market for the world-wide tuna resource :- Mr. T. F. Sandoz, President, Columbia River Packers' Association, calls attention to the similarity which the Japanese tuna fisheries bear to those of America. Thus the Albacore fishery in both countries occurs generally as a localised off-shore harvest. Both countries depend on far-off fields for the expansion of their yellow fin tuna catches, the American tuna clipper operations corresponding to the Japanese tuna fishing in conjunction with mother ships. There is also a parallel in costs which increase appreciably in direct ratio to the range or extent of fishing effort.

Many of the Japanese fishery authorities and other executives who are responsible for foreign trade showed a definite interest in wanting to work with the United States industry and participate in at least a share of the American tuna market.

While tuna is a world-wide resource, the great majority of which is observed to lie away from the U. S. shores, practically the entire world market for canned tuna would be confined to the United States. Since this market shows all the signs of a continuing growth, Mr. Sandoz considers that it would be unwise to restrict the flow of this commodity which provides valuable raw material for processing in the United States.

Seaweed Resources of Canada :- Dr. A.E. Kerr, President of Dalhousie University, Halifax, is quoted as having recently observed that enough valuable products can be extracted from seaweed to pay Canada's national debt.

PRINTED AT THE ASSUMPTION PRINTING PRESS, BY G. ROCHEREAU, PUBLISHER
51, ORIENTAL AVENUE, BANGKOK, 28/5/1953.